



DEVELOPMENT SERVICES DEPARTMENT
ENVIRONMENTAL COORDINATOR
450 110th Ave NE
BELLEVUE, WA 98009-9012

DETERMINATION OF NON-SIGNIFICANCE

PROPONENT: Vanaja Rajah, City of Bellevue Utilities

LOCATION OF PROPOSAL: 17124 SE 41st St.

DESCRIPTION OF PROPOSAL: Construct an outfall structure in steep slope, stream, and stream buffer to prevent erosion and dissipate energy where a stream exists an existing 48-inch culvert under SE 41st St.

FILE NUMBERS: 17-114331-LO **PLANNER:** Reilly Pittman

The Environmental Coordinator of the City of Bellevue has determined that this proposal does not have a probable significant adverse impact upon the environment. An Environmental Impact Statement (EIS) is not required under RCW 43.21C.030(2)(C). This decision was made after the Bellevue Environmental Coordinator reviewed the completed environmental checklist and information filed with the Land Use Division of the Development Services Department. This information is available to the public on request.

- ☐ There is no comment period for this DNS. There is a 14-day appeal period. Only persons who submitted written comments before the DNS was issued may appeal the decision. A written appeal must be filed in the City Clerk's office by 5:00 p.m. on _____.
- ☒ This DNS is issued after using the optional DNS process in WAC 197-11-355. There is no further comment period on the DNS. There is a 14-day appeal period. Only persons who submitted written comments before the DNS was issued may appeal the decision. A written appeal must be filed in the City Clerk's Office by 5 p.m. on **9/13/2018**
- ☐ This DNS is issued under WAC 197-11-340(2) and is subject to a 14-day comment period from the date below. Comments must be submitted by 5 p.m. on _____. This DNS is also subject to appeal. A written appeal must be filed in the City Clerk's Office by 5:00 p.m. on _____.

This DNS may be withdrawn at any time if the proposal is modified so as to have significant adverse environmental impacts; if there is significant new information indicating a proposals probable significant adverse environmental impacts (unless a non-exempt license has been issued if the proposal is a private project); or if the DNS was procured by misrepresentation or lack of material disclosure.


Environmental Coordinator

8/30/2018

Date

OTHERS TO RECEIVE THIS DOCUMENT:

- ☒ State Department of Fish and Wildlife / Stewart.Reinbold@dfw.gov; Christa.Heller@dfw.wa.gov;
- ☒ State Department of Ecology, Shoreline Planner N.W. Region / Jobu461@ecy.wa.gov; sepaunit@ecy.wa.gov
- ☒ Army Corps of Engineers Susan.M.Powell@nws02.usace.army.mil
- ☒ Attorney General ecvolyef@atq.wa.gov
- ☒ Muckleshoot Indian Tribe Karen.Walter@muckleshoot.nsn.us; Fisheries.fileroom@muckleshoot.nsn.us



**City of Bellevue
Development Services Department
Land Use Staff Report**

Proposal Name: COBU SE 41st St. Storm Drain Culvert Rehabilitation

Proposal Address: 17124 SE 41st St.

Proposal Description: Land Use review of a Critical Areas Land Use Permit for the City of Bellevue Utilities Department to construct an outfall structure to prevent erosion and dissipate energy where a stream exits from an existing 48-inch culvert. The culvert carries a stream under SE 41st St. and empties below the street into a steeply sloped ravine. The proposed outfall construction impacts 560 square feet of steep slopes, stream, and stream buffer.


File Number: 17-114331-LO

Applicant: Vanaja Rajah, City of Bellevue Utilities


Decisions Included: Critical Areas Land Use Permit
(Process II. 20.30P)

Planner: Reilly Pittman, Land Use Planner

**State Environmental Policy Act
Threshold Determination:** **Determination of Non-Significance**


Carol V. Helland, Environmental Coordinator
Development Services Department

Director's Decision: **Approval with Conditions**
Michael A. Brennan, Director
Development Services Department

By: 
Elizabeth Stead, Land Use Director

Application Date: May 31, 2017
Notice of Application Publication: July 20, 2017
Decision Publication Date: August 30, 2018
Appeal Deadline: September 13, 2018

For information on how to appeal a proposal, visit Development Services Center at City Hall or call (425) 452-6800. Comments on State Environmental Policy Act (SEPA) Determinations can be made with or without appealing the proposal within the noted comment period for a SEPA Determination. Appeal of the Decision must be received in the City's Clerk's Office by 5 PM on the date noted for appeal of the decision.

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Attachments

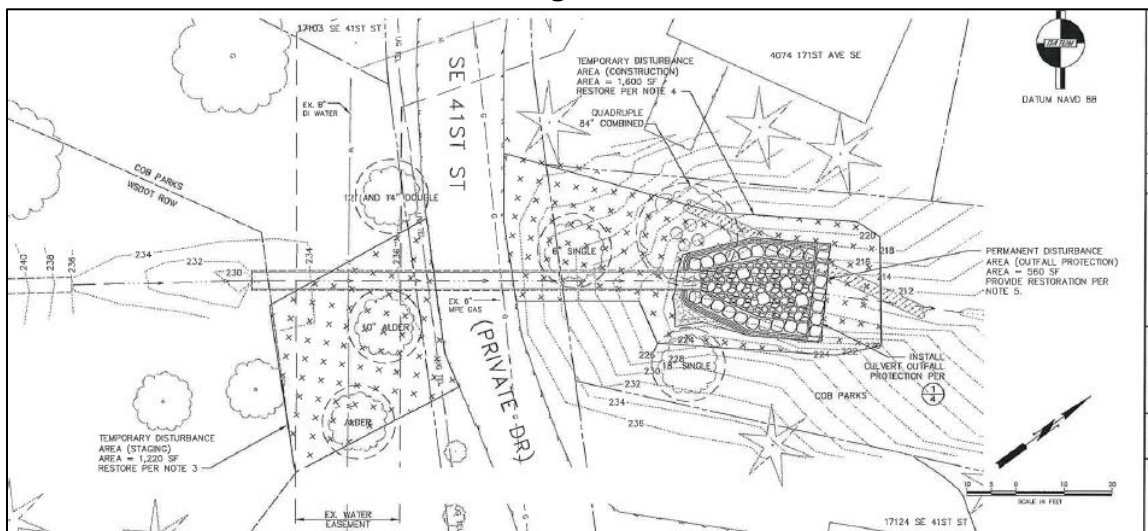
1. Plans – Enclosed
2. Geotech Report – In File
3. Communication between Parks and Utilities – In File
4. SEPA Checklist and Application Forms and Materials – In File

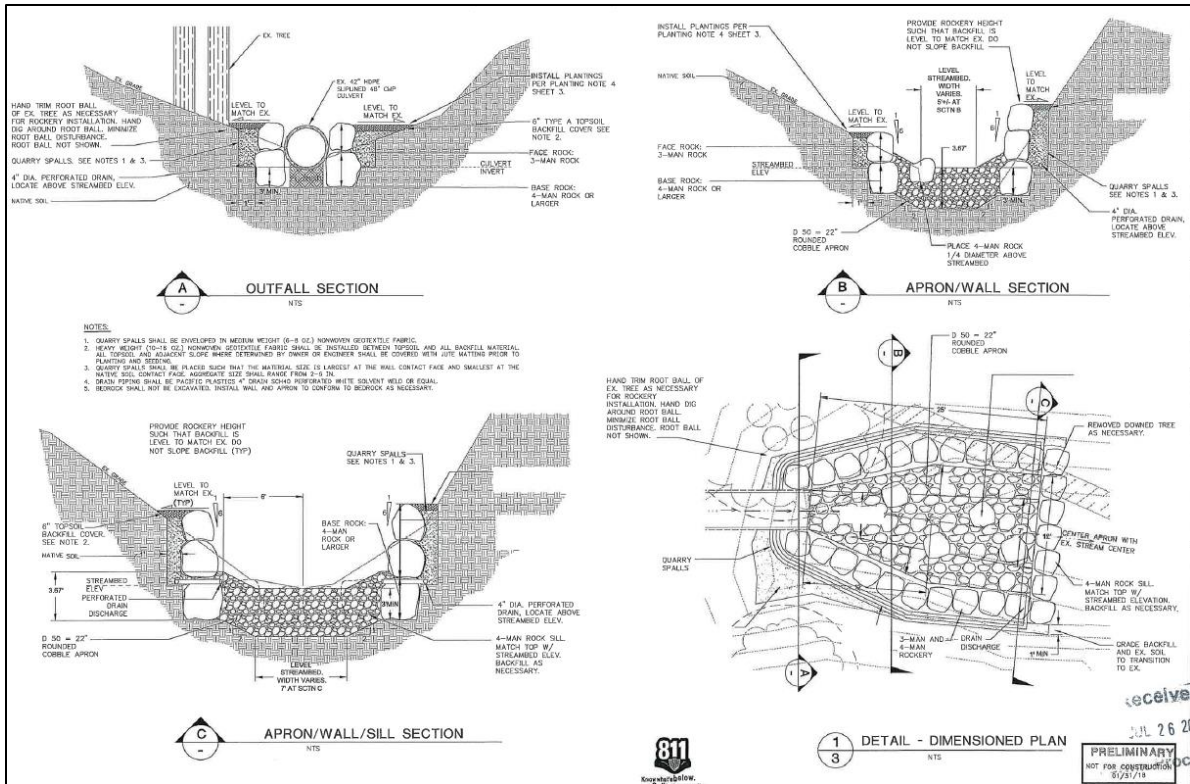
I. Proposal Description

The City of Bellevue Utilities Department proposes to install an outfall structure to protect from erosion and dissipate energy at the downstream end of a stream culvert under SE 41st St and within City of Bellevue Parks open space. Improvements include rock walls and a rock rip rap and cobble apron splash pad. Rocks will be installed by hand and using a shoot to transport them down the steep slope. The existing metal culvert pipe under SE 41st St corroded and was repaired in place under a separate permit. Associated with that repair, this project is proposed to provide necessary protection from erosion where the stream exists the pipe onto a steeply sloped ravine that is downslope of SE 41st Street. The proposal will permanently impact a combined 560 square feet of steep slopes, stream and the stream buffer. Work is required on both sides of the road to implement the proposal and will result in 2,820 square feet of temporary impact to steep slopes and stream buffer. In conformance with LUC 20.25H, all temporary disturbance is proposed to be restored per plan approved by the Parks Department, who owns and maintains the project area. The Utilities applicant has consulted with Parks to determine tree protection measures, restoration requirements, and construction methods. Five hundred and sixty square feet of mitigation is also required to be provided per LUC 20.25H.055, with the location and planting specifics as determined by the Parks Department.

This outfall is part of a culvert system that is a utility facility that enables vehicle access via SE 41st St. Expansion of a utility facility or system is an allowed use in a critical area per LUC 20.25H.055 but requires approval of a Critical Areas Land Use Permit to ensure there is no other feasible alternative and that impacts and disturbance are mitigated and restored. See Figure 1 below for project plan.

Figure 1





II. Site Description, Zoning, Land Use and Critical Areas

A. Site Description

The project area is located in a steeply slope ravine within a City of Bellevue Parks open space known as the Norelius Property and 41.5 Open Space. The stream originates in the Eastgate area of Bellevue and flows under I-90. The stream daylights after I-90 and flows through a ravine where it enters a culvert to allow SE 41st St. to cross above the stream. The stream exits the culvert and continues down steep topography and under SE 40th Pl. The stream then enters private developed property before crossing under W Lake Sammamish Parkway SE and reaching Lake Sammamish. The stream is identified as a Type F; however, both the Department of Fish and Wildlife and the City of Bellevue have determined that the stream segment in question has such a steep grade that it precludes fish use at this location. The project area is a vegetated steep slope critical area covered with mature native trees and an understory of mostly native vegetation. See figure 2 below for the current site.

Figure 2



B. Zoning

The subject site is on City Parks property known as the Norelius Property and 41.5 Open Space. The open spaces are surrounded by residential property zoned R-5.

C. Land Use Context

The project area within the public opens space has a land use designation of Single-Family High Density. No changes to the land use character of the area should result from the project which prevents erosion of a stream bank and outfall.

D. Critical Areas Function and Value, Regulations

i. Streams and Riparian Areas

Most of the elements necessary for a healthy aquatic environment rely on processes sustained by dynamic interaction between the stream and the adjacent riparian area (Naiman et al., 1992). Riparian vegetation in floodplains and along stream banks provides

a buffer to help mitigate the impacts of urbanization (Finkenbine et al., 2000 in Bolton and Shellberg, 2001). Riparian areas support healthy stream conditions.

Riparian vegetation, particularly forested riparian areas, affect water temperature by providing shade to reduce solar exposure and regulate high ambient air temperatures, slowing or preventing increases in water temperature (Brazier and Brown, 1973; Corbett and Lynch, 1985).

Upland and wetland riparian areas retain sediments, nutrients, pesticides, pathogens, and other pollutants that may be present in runoff, protecting water quality in streams (Ecology, 2001; City of Portland 2001). The roots of riparian plants also hold soil and prevent erosion and sedimentation that may affect spawning success or other behaviors, such as feeding.

Both upland and wetland riparian areas reduce the effects of flood flows. Riparian areas and wetlands reduce and desynchronize peak crests and flow rates of floods (Novitzki, 1979; Verry and Boelter, 1979 in Mitsch and Gosselink, 1993). Upland and wetland areas can infiltrate floodflows, which in turn, are released to the stream as baseflow.

Stream riparian areas, or buffers, can be a significant factor in determining the quality of wildlife habitat. For example, buffers comprised of native vegetation with multi- canopy structure, snags, and down logs provide habitat for the greatest range of wildlife species (McMillan, 2000). Vegetated riparian areas also provide a source of large woody debris that helps create and maintain diverse in-stream habitat, as well as create woody debris jams that store sediments and moderate flood velocities.

Sparsely vegetated or vegetated buffers with non-native species may not perform the needed functions of stream buffers. In cases where the buffer is not well vegetated, it is necessary to either increase the buffer width or require that the standard buffer width be restored or revegetated (May 2003). Until the newly planted buffer is established the near term goals for buffer functions may not be attained.

Riparian areas often have shallow groundwater tables, as well as areas where groundwater and surface waters interact. Groundwater flows out of riparian wetlands, seeps, and springs to support stream baseflows. Surface water that flows into riparian areas during floods or as direct precipitation infiltrates into groundwater in riparian areas and is stored for later discharge to the stream (Ecology, 2001; City of Portland, 2001).

ii. Geologic Hazard Areas

Geologic hazards pose a threat to the health and safety of citizens when commercial, residential, or industrial development is inappropriately sited in areas of significant hazard. Some geologic hazards can be reduced or mitigated by engineering, design, or modified construction practices. When technology cannot reduce risks to acceptable levels,

building in geologically hazardous areas is best avoided (WAC 365-190).

Steep slopes may serve several other functions and possess other values for the City and its residents. Several of Bellevue's remaining large blocks of forest are located in steep slope areas, providing habitat for a variety of wildlife species and important linkages between habitat areas in the City. These steep slope areas also act as conduits for groundwater, which drains from hillsides to provide a water source for the City's wetlands and stream systems. Vegetated steep slopes also provide a visual amenity in the City, providing a "green" backdrop for urbanized areas enhancing property values and buffering urban development.

iii. Habitat

Urbanization, the increase in human settlement density and associated intensification of land use, has a profound and lasting effect on the natural environment and wildlife habitat (McKinney 2002, Blair 2004, Marzluff 2005, Munns 2006), is a major cause of native species local extinctions (Czech et al 2000), and is likely to become the primary cause of extinctions in the coming century (Marzluff et al. 2001a). Cities are typically located along rivers, on coastlines, or near large bodies of water. The associated floodplains and riparian systems make up a relatively small percentage of land cover in the western United States, yet they provide habitat for rich wildlife communities (Knopf et al. 1988), which in turn provide a source for urban habitat patches or reserves. Consequently, urban areas can support rich wildlife communities. In fact, species richness peaks for some groups, including songbirds, at an intermediate level of development (Blair 1999, Marzluff 2005). Protected wild areas alone cannot be depended on to conserve wildlife species. Impacts from catastrophic events, environmental changes, and evolutionary processes (genetic drift, inbreeding, colonization) can be magnified when a taxonomic group or unit is confined to a specific area, and no one area or group of areas is likely to support the biological processes necessary to maintain biodiversity over a range of geographic scales (Shaughnessy and O'Neil 2001). As well, typological approaches to taxonomy or the use of indicators present the risk that evolutionary potential will be lost when depending on reserves for preservation (Rojas 2007). Urban habitat is a vital link in the process of wildlife conservation in the U.S.

III. Consistency with Code Requirements:

A. Zoning District Dimensional Requirements

The proposal is exempt from meeting zoning dimensional requirements. A clearing and grading permit is required for the work to build the outfall. **See Section X for a related condition of approval.**

B. Critical Areas Requirements LUC 20.25H:

The City of Bellevue Land Use Code Critical Areas Overlay District (LUC 20.25H) establishes

standards and procedures that apply to construction of improvements on any site which contains in whole or in part any portion designated as critical area or critical area buffer. The proposed outfall construction expands an existing utility system within a steep slope critical area and stream and must meet requirements in LUC 20.25H.055.

i. Consistency with LUC 20.25H.055.C.2.a

New or expanded facilities and systems are allowed within the critical area or critical area buffer only where no technically feasible alternative with less impact on the critical area or critical area buffer exists. A determination of technically feasible alternatives will consider:

1. The location of existing infrastructure;

The proposal is constructing an outfall at the end of a culvert that carries a stream in order to protect against erosion. Given the culvert carries a stream underneath a roadway there is no option to relocate the culvert and the outfall proposed.

2. The function or objective of the proposed new or expanded facility or system;

The improvements proposed are intended to protect the stream bank from erosion and to dissipate the velocity of water that exits the culvert.

3. Demonstration that no alternative location or configuration outside of the critical area or critical area buffer achieves the stated function or objective, including construction of new or expanded facilities or systems outside of the critical area;

The outfall must be placed at the end of the culvert which carries the stream. Relocating the outfall would also include enclosing more of the stream. There is no alternative location that allows placement of the outfall outside of critical areas.

4. Whether the cost of avoiding disturbance is substantially disproportionate as compared to the environmental impact of proposed disturbance; and

The proposed improvements maintain the existing facility and provide for missing erosion protection. The risk of erosion and sediment input into the stream and Lake Sammamish is a greater potential impact than the impact from constructing the proposed outfall.

5. The ability of both permanent and temporary disturbance to be mitigated.

The project was designed to avoid and minimize impacts. The project was revised to reduce the proposed size of the outfall to the current footprint of 560 square feet. The applicant has also coordinated with the Parks Department to ensure that tree removal is avoided through guided root pruning and installation using a shoot rather than constructing a construction access. Mitigation is required for the 560 square feet of impacted area and all temporary disturbance is required to be restored per the submitted plans found as attachment 1.

ii. Consistency with LUC 20.25H.055.C.2.b

If the applicant demonstrates that no technically feasible alternative with less impact on the critical area or critical area buffer exists, then the applicant shall comply with the following:

1. Location and design shall result in the least impacts on the critical area or critical area buffer.

As previously discussed the location of the proposed outfall improvements are generally dictated by the location of the culvert.

2. Disturbance of the critical area and critical area buffer, including disturbance of vegetation and soils, shall be minimized.

The proposal consolidates impacts and limits disturbance within the steep slope by minimizing the scope of the proposal.

3. Disturbance shall not occur in habitat used for salmonid rearing or spawning or by any species of local importance unless no other technically feasible location exists.

No salmonid habitat is present on the site or will be impacted by the proposal.

4. Any crossing over of a wetland or stream shall be designed to minimize critical area and critical area buffer coverage and critical area and critical area buffer disturbance, for example by use of bridge, boring, or open cut and perpendicular crossings, and shall be the minimum width necessary to accommodate the intended function or objective; provided, that the Director may require that the facility be designed to accommodate additional facilities where the likelihood of additional facilities exists, and one consolidated corridor would result in fewer impacts to the critical area or critical area buffer than multiple intrusions into the critical area or critical area buffer.

No crossings are proposed.

5. All work shall be consistent with applicable City of Bellevue codes and standards.

The proposed project will comply with City of Bellevue codes and standards.

6. The facility or system shall not have a significant adverse impact on overall aquatic area flow peaks, duration or volume or flood storage capacity, or hydroperiod.

The project maintains existing drainage flow and direction and does not alter flood storage or hydroperiod of any aquatic areas.

- 7. Associated parking and other support functions, including, for example, mechanical equipment and maintenance sheds, must be located outside critical area or critical area buffer except where no feasible alternative exists.**

No parking function is proposed and can be provided from the road crossing over the stream culvert.

- 8. Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.210.**

The proposal results in 560 square feet of permanent disturbance within the steep slope that will be mitigated by installation of mitigation planting. The estimated 2,820 square feet of temporary disturbance is also to be restored. See attachment 1 for planting plan. A final planting plan is required to be submitted under the clearing and grading permit that shows all restoration of temporary disturbance but also identifies the location of mitigation planting and the plants to be installed at the direction of the Parks Department. **See Section X for a related condition of approval.**

iii. Consistency with LUC 20.25H.125

Development within a landslide hazard or steep slope critical area or the critical area buffers of such hazards shall incorporate the following additional performance standards in design of the development, as applicable. The requirement for long-term slope stability shall exclude designs that require regular and periodic maintenance to maintain their level of function.

- 1. Structures and improvements shall minimize alterations to the natural contour of the slope, and foundations shall be tiered where possible to conform to existing topography;**

No structures are proposed. The outfall facility includes walls at the toe of the slope to support the outfall

- 2. Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation;**

The proposal was reduced to avoid impact to the steep slope and minimize removal of significant trees. The location of the outfall protection is dictated by the location of the exiting culvert.

- 3. The proposed development shall not result in greater risk or a need for increased buffers on neighboring properties;**

The geotech report submitted states that the improvements will protect the slope from erosion and that the project meets the performance standards in LUC 20.25H.125.

- 4. The use of retaining walls that allow the maintenance of existing natural slope**

area is preferred over graded artificial slopes where graded slopes would result in increased disturbance as compared to use of retaining wall;

The proposed retaining wall provides an area for the facility and maintains the slope above and around the facility. The resulting design minimizes the area of disturbance associated with the construction of the facility.

- 5. Development shall be designed to minimize impervious surfaces within the critical area and critical area buffer;**

No new impervious surfaces are proposed.

- 6. Where change in grade outside the building footprint is necessary, the site retention system should be stepped and regrading should be designed to minimize topographic modification. On slopes in excess of 40 percent, grading for yard area may be disallowed where inconsistent with this criteria;**

Not applicable.

- 7. Building foundation walls shall be utilized as retaining walls rather than rockeries or retaining structures built separately and away from the building wherever feasible. Freestanding retaining devices are only permitted when they cannot be designed as structural elements of the building foundation;**

Not applicable.

- 8. On slopes in excess of 40 percent, use of pole-type construction which conforms to the existing topography is required where feasible. If pole-type construction is not technically feasible, the structure must be tiered to conform to the existing topography and to minimize topographic modification;**

Not applicable.

- 9. On slopes in excess of 40 percent, piled deck support structures are required where technically feasible for parking or garages over fill-based construction types; and**

Not applicable.

- 10. Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.210.**

The proposal results in 560 square feet of permanent disturbance that will be mitigated with planting guided by the Parks Department. The areas of temporary disturbance will be restored per the submitted plan found as attachment 1. **See Section X for a related condition of approval.**

IV. Public Notice and Comment

Application Date:	May 31, 2017
Public Notice (500 feet):	July 20, 2017
Minimum Comment Period:	August 3, 2017

The Notice of Application for the Critical Areas Land Use Permit was published in the City of Bellevue Weekly Permit Bulletin and the Seattle Times on July 20, 2017. Notice was also mailed to property owners within 500 feet of the project site. No comments were received.

V. Summary of Technical Reviews

A. Clearing and Grading

The Clearing and Grading Division of the Development Services Department has reviewed the proposed site development for compliance with Clearing and Grading codes and standards. The Clearing and Grading staff found no issues with the proposed development.

VI. State Environmental Policy Act (SEPA)

The environmental review indicates no probability of significant adverse environmental impacts occurring as a result of the proposal. The Environmental Checklist submitted with the application adequately discloses expected environmental impacts associated with the project. The City codes and requirements, including the Clear and Grade Code, Utility Code, Land Use Code, Noise Ordinance, Building Code and other construction codes are expected to mitigate potential environmental impacts. Therefore, issuance of a Determination of Non-Significance (DNS) is the appropriate threshold determination under the State Environmental Policy Act (SEPA) requirements.

A. Earth, Air, and Water

Any erosion potential would be temporary and mitigated by required best management practices for erosion control in conformance with the City's Clearing and Grading Code BCC 23.76. No surface water withdrawals or diversions are proposed.

B. Animals

No animals are known to be present in the work area at the outfall of the culvert. The vegetation surrounding the outfall and stream can provide habitat for birds and small animals. Habitat will be improved by installation of native vegetation.

C. Plants

Existing trees are avoided by the proposal with the work near trees guided by the Parks department. If trees are removed after this review mitigation for any tree removal will be required and directed by the Parks Department. **See Section X for a related condition of approval.**

D. Noise

The project is adjacent to primarily commercial properties but is near some residential properties whose residents are most sensitive to disturbance from noise during evening, late night and weekend hours when they are likely to be at home. Construction noise will be limited by the City's Noise Ordinance (Chapter 9.18 BCC) which regulates construction hours and noise levels. **See Section X for a related condition of approval.**

VII. Changes to Proposal Due to Staff Review

Staff requested the applicant to limit the proposed disturbance to the steep slope to the minimum necessary. Staff also required the Utilities Department to coordinate their work and placement of their mitigation planting with the Parks Department that owns and maintains this open space area.

VIII. Decision Criteria

A. 20.30P.140 Critical Area Land Use Permit Decision Criteria – Decision Criteria

The Director may approve, or approve with modifications an application for a Critical Area Land Use Permit if:

1. The proposal obtains all other permits required by the Land Use Code;

The applicant must obtain a clearing and grading permit. All permits must reference this approval. **See Section X for a related condition of approval.**

2. The proposal utilizes to the maximum extent possible the best available construction, design and development techniques which result in the least impact on the critical area and critical area buffer;

The project utilizes the best available construction techniques to have the least impact on critical areas as possible. An area of 560 square feet will be impacted. This area will be mitigated by 560 square feet of native planting so that the critical area function is improved above the existing condition. **See Section X for a related condition of approval.**

3. The proposal incorporates the performance standards of Part 20.25H to the maximum extent applicable, and ;

As discussed in Section III of this report performance standards will be met.

4. The proposal will be served by adequate public facilities including street, fire protection, and utilities; and;

The proposed activity will maintain a drainage facility.

5. The proposal includes a mitigation or restoration plan consistent with the requirements of LUC Section 20.25H.210; and

The submitted mitigation plan is consistent with LUC 20.25H.210. Maintenance and monitoring is proposed for five years in coordination with the Parks Department that will monitor the planting maintenance. **See Section X for a related condition of approval.**

6. The proposal complies with other applicable requirements of this code.

As discussed in this report, the proposal complies with all other applicable requirements of the Land Use Code.

IX. Conclusion and Decision

After conducting the various administrative reviews associated with this proposal, including Land Use Code consistency, SEPA, City Code and Standard compliance reviews, the Director of Development Services Department does hereby **approve with conditions** the proposed construction of outfall protection for the culvert under SE 41st St.

Note- Expiration of Approval of Critical Areas Land Use Permit: In accordance with LUC 20.30P.150 a Critical Areas Land Use Permit automatically expires and is void if the applicant fails to file for a clearing and grading permit or other necessary development permits within one year of the effective date of the approval.

X. Conditions of Approval

The applicant shall comply with all applicable Bellevue City Codes and Ordinances including but not limited to:

<u>Applicable Ordinances</u>	<u>Contact Person</u>
Clearing and Grading Code – BCC 23.76	Savina Uzunow, 425-452-7860
Land Use Code – BCC Title 20	Reilly Pittman, 425-452-4350
Noise Control – BCC 9.18	Reilly Pittman, 425-452-2973

The following conditions are imposed under the Bellevue City Code and SEPA authority referenced:

- 1. Clearing and Grading Permit:** A clearing and grading permit is required to construct the proposed outfall. Plans submitted as part of any future application shall be consistent with the activity permitted under this approval.

Authority: Land Use Code 20.30P.140
Reviewer: Reilly Pittman, Development Services Department

2. **Mitigation Planting Plan:** Five hundred and sixty square feet of mitigation planting is required at a minimum. All areas of temporary disturbance are required to be restored. The planting plan submitted as attachment 1 must be revised to include the mitigation planting area and submitted with the clearing and grading permit.

Authority: Land Use Code 20.30P.140
Reviewer: Reilly Pittman, Development Services Department

3. **Maintenance and Monitoring:** The planting plan needs to include reference to the five years of maintenance and monitoring agreement between the Utilities Department and the Parks Department.

Authority: Land Use Code 20.30P.140; 20.25H.220
Reviewer: Reilly Pittman, Development Services Department

4. **Tree Removal:** If any tree removal is determined necessary by the Parks Department, the planting plan approved under the required clearing and grading permit must be revised and submitted for review and approval by Development Services.

Authority: Land Use Code 20.30P.140; 20.25H.220
Reviewer: Reilly Pittman, Development Services Department

5. **Noise Control:** Noise related to construction is exempt from the provisions of BCC 9.18 between the hours of 7 am to 6 pm Monday through Friday and 9 am to 6 pm on Saturdays, except for Federal holidays and as further defined by the Bellevue City Code. Noise emanating from construction is prohibited on Sundays or legal holidays unless expanded hours of operation are specifically authorized in advance. Requests for construction hour extension must be done in advance with submittal of a construction noise expanded exempt hours permit.

Authority: Bellevue City Code 9.18
Reviewer: Reilly Pittman, Development Services Department

CITY OF BELLEVUE UTILITIES DEPARTMENT



VASA SE 41ST ST 48" CULVERT REPAIR BU NUMBER: 281690102

MAYOR
JOHN STOKES
DEPUTY MAYOR
JOHN CHELMINIAK
CITY MANAGER
BRAD MIYAKE
UTILITIES DIRECTOR
NAV OTAL

CITY COUNCIL
CONRAD LEE
JENNIFER ROBERTSON
LYNNE ROBINSON
ERNIE SIMAS
KEVIN WALLACE

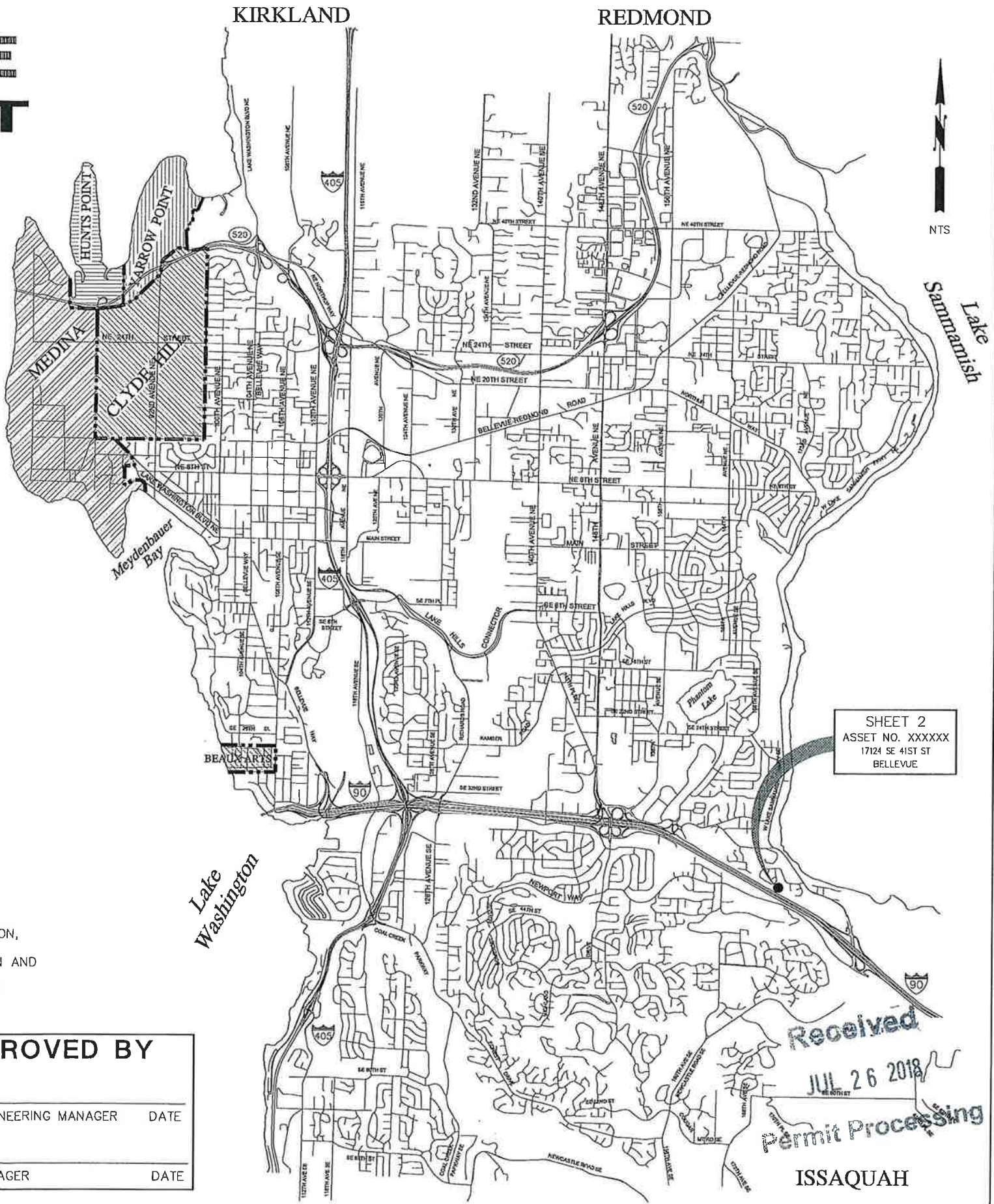
BID NO. 17062
C.I.P. D-64

PRELIMINARY
NOT FOR CONSTRUCTION
01/31/18



- SHEET INDEX
- 1. COVER
 - 2. NOTES LEGEND
 - 3. DISTURBANCE, RESTORATION, MITIGATION
 - 4. OUTLET PROTECTION PLAN AND SECTIONS
 - 5. CSWPP, TREE PROTECTION & TEMPORARY BYPASS

APPROVED BY	
UTILITIES ENGINEERING MANAGER	DATE
PROJECT MANAGER	DATE



SHEET 2
ASSET NO. XXXXXX
17124 SE 41ST ST
BELLEVUE

USER: Tucker Collins PLOTTING DATE: 1/31/2018 FILE LOCATION: K:\22-Bellevue\2016\221601-Trenchless On-call Utility Design\Task C - SE 41st Design\2016\221601 - 2016 CULVERT REPAIR - DWG\INSTR PRIN ONLY.dwg

CITY OF BELLEVUE UTILITIES DEPARTMENT STORM DRAINAGE GENERAL NOTES

(1) ALL WORK SHALL CONFORM TO THE 2017 EDITION OF THE CITY OF BELLEVUE UTILITIES DEPARTMENT ENGINEERING STANDARDS AND THE DEVELOPER EXTENSION AGREEMENT.

(2) STORM PIPE SHALL BE PVC CONFORMING TO ASTM D-3034 SDR-35 (1'-15") OR ASTM F-679 (10'-27"). BEDDING AND BACKFILL SHALL BE AS SHOWN IN THE STANDARD DETAILS.

(3) THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE EXCAVATOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN, AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN HEREON WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN. IMMEDIATELY NOTIFY THE ENGINEER IF A CONFLICT EXISTS.

(4) THE FOOTING DRAINAGE SYSTEM AND THE ROOF DOWNSPOUT SYSTEM SHALL NOT BE INTERCONNECTED AND SHALL SEPARATELY CONVEY COLLECTED FLOWS TO THE CONVEYANCE SYSTEM OR TO ON-SITE STORMWATER FACILITIES.

(5) PROVIDE AND MAINTAIN TEMPORARY SEDIMENTATION COLLECTION FACILITIES TO ENSURE THAT SEDIMENT OR OTHER HAZARDOUS MATERIALS DO NOT ENTER THE STORM DRAINAGE SYSTEM IN ACCORDANCE WITH THE SITES APPROVED CSWPPP. FOR ALL CONSTRUCTION DURING THE RAINY SEASON, DOWNHILL BASINS AND INLETS MUST BE PROTECTED WITH CATCH BASIN INSERTS. SIMPLY PLACING FILTER FABRIC UNDER THE GRATE IS NOT ACCEPTABLE.

(6) PRIOR TO FINAL INSPECTION AND ACCEPTANCE OF STORM DRAINAGE WORK, PIPES AND STORM DRAIN STRUCTURES SHALL BE CLEANED AND FLUSHED. ANY OBSTRUCTIONS TO FLOW WITHIN THE STORM DRAIN SYSTEM, (SUCH AS RUBBLE, MORTAR AND WEDGED DEBRIS), SHALL BE REMOVED AT THE NEAREST STRUCTURE. WASH WATER OF ANY SORT SHALL NOT BE DISCHARGED TO THE STORM DRAIN SYSTEM OR SURFACE WATERS. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL REMOVE CATCH BASIN INSERTS.

(7) ENDS OF EACH STORM DRAIN STUD AT THE PROPERTY LINE SHALL BE CAPPED AND LOCATED WITH AN 8" LONG 2" X 4" BOARD, EMBEDDED TO THE STUD CAP AND EXTENDING AT LEAST 3 FEET ABOVE GRADE, AND MARKED PERMANENTLY "STORM", A COPPER 12 GA. LOCATE WIRE FIRMLY ATTACHED. THE STUD DEPTH SHALL BE INDICATED ON THE MARKER.

(8) ALL GRATES IN ROADWAYS SHALL BE DUCTILE IRON, BOLT-LOCKING, VANED GRATES PER THE STANDARD DETAILS. STRUCTURES IN TRAFFIC LANES OUTSIDE OF THE CURBLINE WHICH DO NOT COLLECT RUNOFF SHALL BE FITTED WITH ROUND, BOLT-LOCKING SOLID COVERS. OFF-STREET STRUCTURES WHICH DO NOT COLLECT RUNOFF SHALL BE FITTED WITH BOLT-LOCKING SOLID COVERS.

(9) VEGETATION/LANDSCAPING IN THE DETENTION POND, BIORETENTION FACILITY, VEGETATED ROOF AND/OR DRAINAGE SWALE(S) ARE AN INTEGRAL PART OF THE RUNOFF TREATMENT SYSTEM FOR THE PROJECT. SUCH DRAINAGE FACILITIES WILL NOT BE ACCEPTED UNTIL PLANTINGS ARE ESTABLISHED.

(10) ALL NEW MANHOLES SHALL HAVE A MINIMUM INSIDE DIAMETER OF 48" AND SHALL CONFORM TO THE STANDARD DETAILS. ALL NEW CATCH BASINS SHALL CONFORM TO THE STANDARD DETAILS.

(11) SIDE STORM STATIONS ARE REFERENCED FROM NEAREST DOWNSTREAM MANHOLE/CATCH BASIN.

(12) ALL TESTING AND CONNECTIONS TO EXISTING MAINS SHALL BE DONE IN THE PRESENCE OF A REPRESENTATIVE OF THE CITY OF BELLEVUE UTILITIES DEPARTMENT.

(13) ALL TRENCHES SHALL BE COMPACTED, AND HOT MIX ASPHALT IN PLACE IN PAVED AREAS, PRIOR TO TESTING STORM LINES FOR ACCEPTANCE.

(14) ALL PUBLIC STORM DRAINS SHALL BE AIR TESTED AND HAVE A VIDEO INSPECTION PERFORMED PRIOR TO ACCEPTANCE (SEE #23 BELOW). STORM MAINS CONSTRUCTED WITH FLEXIBLE PIPE SHALL BE DEFLECTION TESTED WITH A MANDREL PRIOR TO ACCEPTANCE.

(15) STORM STUDS SHALL BE TESTED FOR ACCEPTANCE AT THE SAME TIME THE MAIN STORM IS TESTED.

(16) ALL MANHOLES/CATCH BASINS IN UNPAVED AREAS SHALL INCLUDE A CONCRETE SEAL AROUND ADJUSTMENT RINGS PER STANDARD DETAILS.

(17) ALL STORM MAIN EXTENSIONS WITHIN THE PUBLIC RIGHT-OF-WAY OR IN EASEMENTS MUST BE "STAKED" BY A SURVEYOR LICENSED IN WASHINGTON STATE FOR "LINE AND GRADE" AND CUT SHEETS PROVIDED TO THE ENGINEER, PRIOR TO STARTING CONSTRUCTION.

(18) THE CONTRACTOR SHALL USE A VACUUM STREET SWEEPER TO REMOVE DUST AND DEBRIS FROM PAVEMENT AREAS AS DIRECTED BY THE ENGINEER. FLUSHING OF STREETS SHALL NOT BE PERMITTED WITHOUT PRIOR CITY APPROVAL.

(19) STORM DRAINAGE MAINLINES, STUDS AND FITTINGS SHALL BE CONSTRUCTED USING THE SAME PIPE MATERIAL AND MANUFACTURER. CONNECTIONS BETWEEN STUDS AND THE MAINLINE WILL BE MADE WITH A TEE FITTING. TEE FITTING SHALL BE FROM SAME MANUFACTURER AS PIPE. CUT-IN CONNECTIONS ARE ONLY ALLOWED WHEN CONNECTING A NEW STUD TO AN EXISTING MAINLINE.

(20) MANHOLES, CATCH BASINS AND VAULTS ARE CONSIDERED TO BE PERMIT REQUIRED CONFINED SPACES. ENTRY INTO THESE SPACES SHALL BE IN ACCORDANCE WITH CHAPTER 296-809 WAC.

(21) PLACEMENT OF SURFACE APPURTENANCES (MH LIDS, VALVE LIDS, ETC) IN TIRE TRACKS OF TRAFFIC LANES SHALL BE AVOIDED WHENEVER POSSIBLE.

(22) CALL 1-800-424-5555, OR 8-1-1, 72 HOURS BEFORE CONSTRUCTION FOR UTILITY LOCATES.

(23) THE CONTRACTOR SHALL PERFORM A VIDEO INSPECTION AND PROVIDE A DVD OF THE STORM PIPE INTERIOR FOR THE CITY'S REVIEW. THE VIDEO SHALL PROVIDE A MINIMUM OF 14 LINES PER MILLIMETER RESOLUTION AND COVER THE ENTIRE LENGTH OF THE APPLICABLE PIPE. THE CAMERA SHALL BE MOVED THROUGH THE PIPE AT A UNIFORM RATE (30 FT/MIN), STOPPING WHEN NECESSARY TO ENSURE PROPER DOCUMENTATION OF THE PIPE CONDITION. THE VIDEO SHALL BE TAKEN AFTER INSTALLATION AND CLEANING TO INSURE THAT NO DEFECTS EXIST. THE PROJECT WILL NOT BE ACCEPTED UNTIL ALL DEFECTS HAVE BEEN REPAIRED.

(24) CLEARLY LABEL PUBLIC AND PRIVATE SYSTEMS ON THE PLANS. PRIVATE SYSTEMS SHALL BE MARKED PRIVATE AND SHALL BE MAINTAINED BY THE PROPERTY OWNER(S).

(25) ALL CONCRETE STRUCTURES (VAULTS, CATCH BASINS, MANHOLES, OIL/WATER SEPARATORS, ETC.) SHALL BE VACUUM TESTED.

(26) MANHOLES, CATCH BASINS AND INLETS IN EASEMENTS SHALL BE CONSTRUCTED TO PROVIDE A STABLE LEVEL GRADE FOR A MINIMUM RADIUS OF 2.5 FEET AROUND THE CENTER OF THE ACCESS OPENING TO ACCOMMODATE CONFINED SPACE ENTRY EQUIPMENT.

(27) TOPS OF MANHOLES/CATCH BASINS WITHIN PUBLIC RIGHT-OF-WAY SHALL NOT BE ADJUSTED TO FINAL GRADE UNTIL AFTER PAVING.

(28) CONTRACTOR SHALL ADJUST ALL MANHOLE/CATCH BASIN RIMS TO FLUSH WITH FINAL FINISHED GRADES, UNLESS OTHERWISE SHOWN.

(29) CONTRACTOR SHALL INSTALL, AT ALL CONNECTIONS TO EXISTING DOWNSTREAM MANHOLES/CATCH BASINS, SCREENS OR PLUGS TO PREVENT FOREIGN MATERIALS FROM ENTERING EXISTING STORM DRAINAGE SYSTEM. SCREENS OR PLUGS SHALL REMAIN IN PLACE THROUGHOUT THE DURATION OF THE CONSTRUCTION AND SHALL BE REMOVED ALONG WITH COLLECTED DEBRIS AT THE TIME OF FINAL INSPECTION AND IN THE PRESENCE OF A REPRESENTATIVE OF THE CITY OF BELLEVUE UTILITIES DEPARTMENT.

(30) SURFACE RESTORATION OF EXISTING ASPHALT PAVEMENT SHALL BE AS REQUIRED BY THE RIGHT-OF-WAY USE PERMIT.

(31) THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF FIVE FEET (5') HORIZONTAL SEPARATION BETWEEN ALL WATER AND STORM DRAINAGE LINES. ANY CONFLICT SHALL BE REPORTED TO THE UTILITY AND THE DEVELOPER'S ENGINEER PRIOR TO CONSTRUCTION.

(32) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT NO CONFLICTS EXIST BETWEEN STORM DRAINAGE LINES AND PROPOSED OR EXISTING UTILITIES PRIOR TO CONSTRUCTION.

(33) BEFORE COMMENCEMENT OF TRENCHING, THE CONTRACTOR SHALL PROVIDE FILTER FABRIC FOR ALL DOWNHILL STORM DRAIN INLETS AND CATCH BASINS, WHICH WILL RECEIVE RUNOFF FROM THE PROJECT SITE. THE CONTRACTOR SHALL PERIODICALLY INSPECT THE CONDITION OF ALL FILTER FABRIC AND REPLACE AS NECESSARY.

(34) MINIMUM COVER OVER STORM DRAINAGE PIPE SHALL BE 2 FEET, UNLESS OTHERWISE SHOWN.

(35) AVOID CROSSING WATER OR SEWER MAINS AT HIGHLY ACUTE ANGLES. THE SMALLEST ANGLE MEASURE BETWEEN UTILITIES SHOULD BE 45 DEGREES.

(36) AT POINTS WHERE EXISTING THRUST BLOCKING IS FOUND, MINIMUM CLEARANCE BETWEEN CONCRETE BLOCKING AND OTHER BURIED UTILITIES OR STRUCTURES SHALL BE 5 FEET.

(37) WHEN WORK IS TO OCCUR IN EASEMENTS, THE CONTRACTOR SHALL NOTIFY THE EASEMENT GRANTOR AND BELLEVUE UTILITIES IN WRITING A MINIMUM OF 48 HOURS IN ADVANCE OF BEGINNING WORK (NOT INCLUDING WEEKENDS OR HOLIDAYS). FAILURE TO NOTIFY GRANTOR AND BELLEVUE UTILITIES WILL RESULT IN A STOP WORK ORDER BEING POSTED UNTIL THE MATTER IS RESOLVED TO THE SATISFACTION OF BELLEVUE UTILITIES. A WRITTEN RELEASE FROM THE EASEMENT GRANTOR SHALL BE FURNISHED TO THE UTILITIES INSPECTOR PRIOR TO PERMIT SIGNOFF.

(38) THE CONTRACTOR SHALL RESTORE THE DISTURBED AREA AS A RESULT OF CONSTRUCTION. THE CONTRACTOR SHALL FURNISH A SIGNED RELEASE FROM ALL AFFECTED PROPERTY OWNERS AFTER RESTORATION HAS BEEN COMPLETED.

(39) WHERE A NEW UTILITY LINE CROSSES BELOW AN EXISTING AC MAIN, THE AC PIPE SHALL BE REPLACED WITH DI PIPE TO 3 FEET PAST EACH SIDE OF THE TRENCH AS SHOWN ON STANDARD DETAIL W-8. ALTERNATIVELY, WHERE DIRECTED BY THE UTILITY, THE TRENCH SHALL BE BACKFILLED WITH CONTROLLED DENSITY FILL (CDF, AKA FLOWABLE FILL) FROM BOTTOM OF TRENCH TO BOTTOM OF AC MAIN.

TESC NOTES

ANY EXCAVATED MATERIAL REMOVED FROM THE CONSTRUCTION SITE AND DEPOSITED ON PROPERTY WITHIN THE CITY LIMITS MUST BE DONE IN COMPLIANCE WITH A VALID FILL PERMIT. LOCATIONS FOR STOCKPILED MATERIAL MUST BE APPROVED BY THE PLANNING AND COMMUNITY DEVELOPMENT INSPECTOR AT LEAST 24 HOURS IN ADVANCE OF ANY DUMPING.

- * THOSE BOXES CHECKED INDICATE THE MINIMUM REQUIREMENTS. AN EROSION CONTROL SYSTEM USING THE FOLLOWING BMP'S IS TO BE INSTALLED PRIOR TO ANY CLEARING OR GRADING. ADDITIONAL EROSION CONTROLS MAY BE REQUIRED BY THE ENGINEER AS WEATHER AND FIELD CONDITIONS DICTATE. THESE BMP'S ARE BASED ON THE CITY OF BELLEVUE CLEARING AND GRADING CODE, CHAPTER 23.76; COB DEVELOPMENT STANDARDS; COB STANDARD DETAILS CO-1 THROUGH 20 (UPDATED 03/15); AND THE WASHINGTON STATE STORMWATER MANAGEMENT MANUAL FOR THE PUGET SOUND BASIN.

TEMPORARY EROSION CONTROL

CLEARING SHALL BE LIMITED TO THE AREA OF CONSTRUCTION ACTIVITY. DURING WET WEATHER SEASON (OCTOBER 1 THROUGH APRIL 30), THE TIME OF DISTURBED SOIL EXPOSURE SHALL NOT EXCEED 24 HOURS. FROM MAY 1 TO SEPTEMBER 30, THE TIME OF EXPOSURE SHALL NOT BE MORE THAN 5 DAYS. EXPOSED SOIL MUST BE COVERED AT THE END OF THE CONSTRUCTION WEEK AND ALSO THE THREAT OF RAIN. THE CONTRACTOR SHALL HAVE A SUFFICIENT AMOUNT OF MATERIALS FOR THE FOLLOWING BMP'S TO PROVIDE EROSION CONTROL FOR THE SITE AND EMERGENCY PURPOSES.

- PLASTIC COVERING
- TEMPORARY CONSTRUCTION EXIT
- SILT FENCE

SEDIMENT TRAPPING

DEWATERING DEVICE SHALL BE DISCHARGED WHERE SEDIMENT, AND/OR OTHER POLLUTANTS, WILL NOT ENTER THE DRAINAGE SYSTEM. PER DEPARTMENT OF ECOLOGY GUIDELINES, WASTEWATER FROM PORTLAND CEMENT CONCRETE, MASONRY, AND ASPHALT CONCRETE CUTTING OPERATIONS SHALL NOT BE DISCHARGED TO STORM DRAINAGE SYSTEMS OR SURFACE WATERS. A HOLDING AREA AWAY FROM THE SEDIMENT POND MUST BE PROVIDED FOR CONCRETE EFFLUENT. SEDIMENT AND GRIT CONTAMINATION FROM CUTTING OPERATIONS SHALL BE PREVENTED FROM ENTERING THE STORM DRAINAGE SYSTEM OR SURFACE WATERS.

- CATCH BASIN INSERT
- STRAW BALE CHECK DAM

TESC PLAN AND WRITTEN CONSTRUCTION SEQUENCE

A TEMPORARY EROSION AND CONTROL PLAN AND WRITTEN CONSTRUCTION SEQUENCE DESCRIBING HOW CONSTRUCTION AND EROSION CONTROL WILL PROGRESS, RESTORATION BY SECTION, AND PROTECTION OF STOCKPILE AREAS IS REQUIRED. THE CONSTRUCTION SEQUENCE WILL BE REVIEWED WITH THE ENGINEER AT THE PRECONSTRUCTION MEETING.

BMP MAINTENANCE

REGULARLY INSPECT, INCLUDING ON WEEKENDS, ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION BMP'S AND MAINTAIN THEM PER THE WASHINGTON STATE STORMWATER MANAGEMENT MANUAL FOR THE PUGET SOUND BASIN AND THE DEVELOPMENT STANDARDS SO THAT THEY FUNCTION AS INTENDED UNTIL THE SITE HAS BEEN PERMANENTLY STABILIZED. AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED.

PERMANENT EROSION CONTROL

ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED USING THE FOLLOWING METHODS:

- HYDROSEEDING
- HAND SEEDING (RESTORATION WORK ONLY)
- LANDSCAPING/REVEGETATION (RESTORATION WORK ONLY)
- MULCHING TYPE

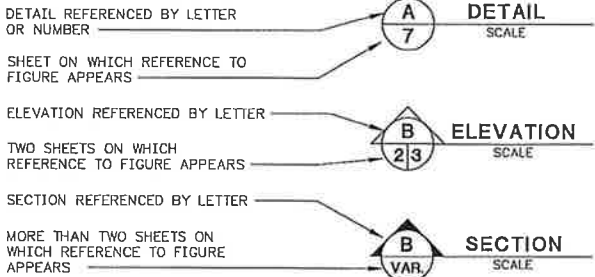
EASEMENTS

ALL PUBLIC AND PRIVATE EASEMENTS SHALL BE PROTECTED, AND ALL EASEMENT RIGHTS MAINTAINED.

UNDERGROUND UTILITY LINES

WHEN CONSTRUCTING UNDERGROUND UTILITY LINES, NO MORE TRENCH SHALL BE OPENED THAN CAN BE CLOSED IN A SINGLE DAY, OR MORE THAN 500 FEET, WHICHEVER IS LESS. EXCAVATED MATERIAL SHALL BE PLACED ON THE DOWNHILL SIDE OF THE TRENCH WHERE CONSISTENT WITH THE SAFETY AND SPACE CONSIDERATIONS. TEMPORARY TRENCH DEWATERING DEVICES SHALL BE DISCHARGED INTO A SEDIMENT TRAP OR POND. TRENCHES SHALL BE CLOSED AT THE END OF EACH DAY UNLESS OTHERWISE ALLOWED BY THE ENGINEER. FOR UTILITY TRENCHING AND OTHER CLEARING AND GRADING WORK IN STREET RIGHTS-OF-WAY, EROSION AND SEDIMENTATION CONTROL BMP'S PER THE STORMWATER MANAGEMENT MANUAL FOR THE PUGET SOUND BASIN. THE COB DEVELOPMENT STANDARDS AND STANDARD DETAILS SHALL BE USED. THE BMP'S SHALL BE MAINTAINED DAILY.

REFERENCE SYMBOLS



ROCK WALL NOTES

1. CONSTRUCT ROCKERY TO PRESERVE EX. GRADE AND NATURAL SLOPE FROM EROSION.
2. BACKFILL IN ACCORDANCE WITH PROJECT SPECIFICATIONS.

RESTORATION AND MITIGATION

THIS PLAN HAS BEEN PREPARED AS MITIGATION FOR THE TEMPORARY AND PERMANENT DISTURBANCE OF A CRITICAL AREA IN CITY OF BELLEVUE PARKS PROPERTY IN BELLEVUE (PARCEL #2607801160). THE CRITICAL AREA DISTURBANCE IS NECESSARY TO REPLACE ERODED MATERIAL, PROVIDE STREAM BANK PROTECTION AND ENERGY DISSIPATION FOR A CULVERT OUTLET THAT CONVEYS STORMWATER BENEATH SE 41ST STREET. THE STREAM BANKS, STREAM BED AND OUTFALL HEADWALL ARE NOT PRESENTLY ARMORED AND ARE ERODING. PROPOSED INSTALLATIONS WILL OCCUR WITHIN THE STREAM BED AND ADJACENT STREAM BANK STEEP SLOPES.

ENHANCEMENT OF THE CRITICAL AREA WILL INCLUDE INSTALLATION OF A RIP RAP APRON AND SURROUNDING ROCK WALL.

WORK SEQUENCE

CITY STAFF WILL MAKE SITE VISITS TO VERIFY THE FOLLOWING PROJECT MILESTONES:

1. INSTALL TEMPORARY EROSION CONTROL, BYPASS SYSTEM AND TREE PROTECTION MEASURES ACCORDING TO CONSTRUCTION PLANS.
2. REPAIR PIPE GROWN-OVALITY AND EXTERIOR VOID SPACES ACCORDING TO CONSTRUCTION PLANS.
3. INSTALL 42" HDPE SPLIT-PIPE CULVERT ACCORDING TO CONSTRUCTION PLANS.
4. INSTALL OUTFALL COBBLE APRON AND BORDERING ROCK WALL ACCORDING TO CONSTRUCTION PLANS.
5. INSTALL PLANTINGS AND MULCH, HYDROSEED DISTURBED AREAS AND TOPSOIL ACCORDING TO CONSTRUCTION PLANS.
6. REMOVE TEMPORARY EROSION CONTROL, BYPASS SYSTEM AND TREE PROTECTION MEASURES.

MAINTENANCE

THE SITE SHALL BE MAINTAINED BY COB PARKS DEPT. FOR FIVE YEARS FOLLOWING SUCCESSFUL INSTALLATION. REPLACE PLANTINGS AND MULCH AND REAPPLY NATIVE HYDROSEED GRASS MIX AS NEEDED.

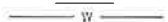
GOAL

RESTORE EXISTING GROUND COVER WITH NATIVE PLANT SPECIES.

MONITORING

COB PARKS STAFF WILL MONITOR THE SITE TWICE ANNUALLY FOR FIVE YEARS BEGINNING WITH APPROVAL OF THE AS-BUILT REPORT. CITY STAFF WILL REPORT ON THE CONDITIONS OF THE SITE AND SHALL PROVIDE MAINTENANCE RECOMMENDATIONS THAT MAY BE NECESSARY TO HELP THE SITE ACHIEVE THE STATED GOALS.

LEGEND

EXISTING	
	WATER MAIN
	PROPERTY LINE
	RIGHT OF WAY LINE
	EDGE OF PAVEMENT
	DITCH
	UNDERGROUND TELEPHONE
	EASEMENT
	NATIVE SOIL
PROPOSED	
	ROCKERY DRAIN PIPE
	TOPSOIL
	OUTLET PROTECTION ROCK
	QUARRY SPALLS
	RIP RAP APRON
	DISTURBANCE/RESTORATION AREA



DATUM NAVD 88



Know what's below.
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PRELIMINARY

NOT FOR CONSTRUCTION
01/31/18

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CITY OF BELLEVUE

SE 41ST ST CULVERT REPAIR
NOTES AND LEGEND

Sheet 2 of 5
Job No. 221601
12/17

A PORTION OF NW 1/4 SECTION 13, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M., KING COUNTY, WASHINGTON

NOTES:

1. INGRESS AND EGRESS FOR RESIDENCES SHALL BE MAINTAINED DURING CONSTRUCTION.
2. DO NOT DISTURB WSDOT ROW. WSDOT ENTRY PERMITTED FOR INSTALLATION AND REMOVAL OF STORMWATER BYPASS SYSTEM ONLY.
3. MITIGATION FOR THE TEMPORARY DISTURBANCE AREA SOUTH OF SE 41ST STREET SHALL BE PERFORMED AS FOLLOWS:

INSTALL A COMBINATION OF 1-GALLON NATIVE PLANTS SPACED 4-FOOT ON CENTER. NATIVE PLANTS CONSIST OF HAZELNUT, VINE MAPLE, FERN, OREGON GRAPE AND SALAL. INSTALL THREE (3) 5-GALLON CEDAR TREES SPACED EVENLY IN THE DISTURBED AREA. INSTALL 3" OF MULCH OVER THE DISTURBED AREA. THE FOLLOWING IS A QUANTITY SUMMARY OF INSTALLED PLANTS AND MULCH MATERIAL FOR THE TEMPORARY DISTURBANCE AREA SOUTH OF SE 41ST STREET:

PLANT	QUANTITY
HAZELNUT (1-GALLON)	16 EA
VINE MAPLE (1-GALLON)	16 EA
FERN (1-GALLON)	16 EA
OREGON GRAPE (1-GALLON)	16 EA
SALAL (1-GALLON)	16 EA
CEDAR (5-GALLON)	3 EA
MULCH (3" DEPTH)	12 CY

4. MITIGATION FOR THE TEMPORARY DISTURBANCE AREA NORTH OF SE 41ST STREET SHALL BE PERFORMED AS FOLLOWS:

INSTALL JUTE MATTING OVER TOPSOIL AND OVER ADJACENT SLOPE WHERE DETERMINED BY OWNER OR ENGINEER. INSTALL A COMBINATION OF 1-GALLON NATIVE PLANTS SPACED 4-FOOT ON CENTER. NATIVE PLANTS CONSIST OF HAZELNUT, VINE MAPLE, FERN, OREGON GRAPE AND SALAL. HYDROSEED WITH NATIVE GRASS MIX. THE FOLLOWING IS A QUANTITY SUMMARY OF INSTALLED PLANTS AND HYDROSEED MATERIAL FOR THE TEMPORARY DISTURBANCE AREA NORTH OF SE 41ST STREET:

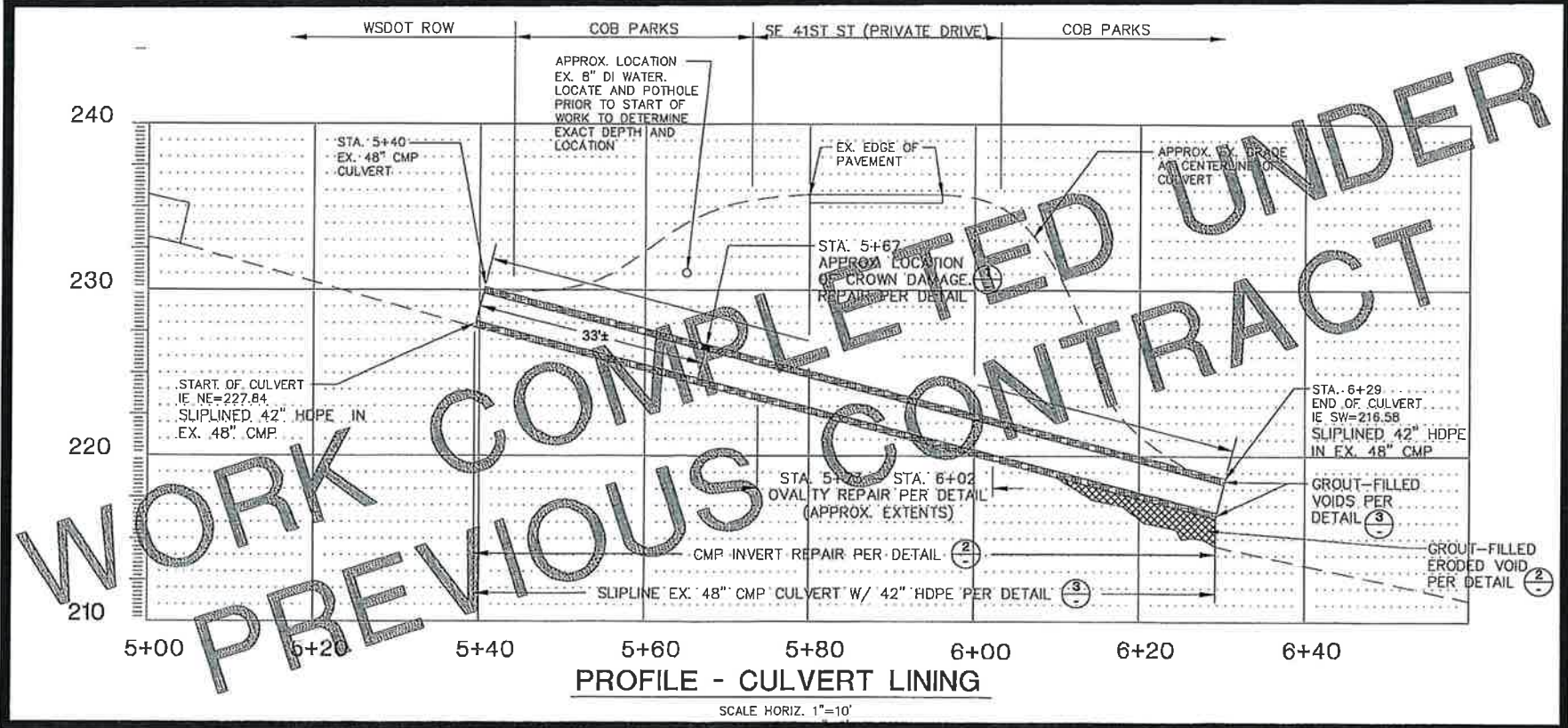
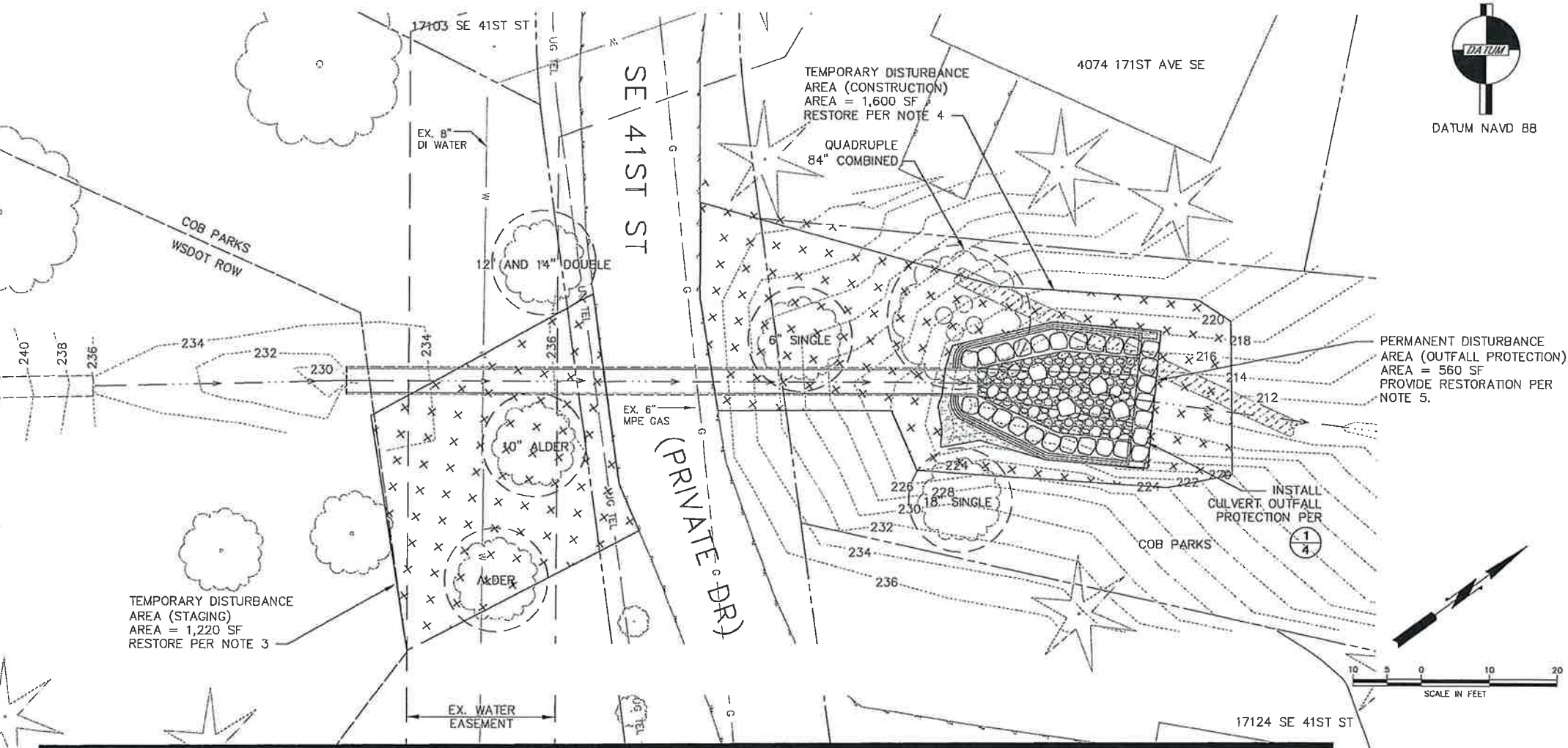
PLANT	QUANTITY
HAZELNUT (1-GALLON)	20 EA
VINE MAPLE (1-GALLON)	20 EA
FERN (1-GALLON)	20 EA
OREGON GRAPE (1-GALLON)	20 EA
SALAL (1-GALLON)	20 EA
HYDROSEED	178 SY

5. MITIGATION FOR THE PERMANENTLY DISTURBED AREA AS A RESULT OF OUTFALL PROTECTION INSTALLATION SHALL BE PERFORMED AS FOLLOWS:

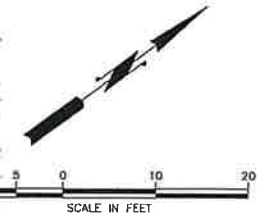
COORDINATE WITH THE COB PARKS DEPT. DETERMINE ADEQUATE LOCATION FOR RESTORATION MEASURES. INSTALL A COMBINATION OF 1-GALLON NATIVE PLANTS SPACED 4-FOOT ON CENTER. NATIVE PLANTS CONSIST OF HAZELNUT, VINE MAPLE, FERN, OREGON GRAPE AND SALAL. INSTALL MULCH OR HYDROSEED WITH NATIVE GRASS MIX AS DIRECTED BY THE PARKS DEPT. THE FOLLOWING IS A QUANTITY SUMMARY OF INSTALLED PLANTS AND MULCH OR HYDROSEED MATERIAL FOR MITIGATION OF THE PERMANENTLY DISTURBED AREA:

PLANT	QUANTITY
HAZELNUT (1-GALLON)	7 EA
VINE MAPLE (1-GALLON)	7 EA
FERN (1-GALLON)	7 EA
OREGON GRAPE (1-GALLON)	7 EA
SALAL (1-GALLON)	7 EA
MULCH (3" DEPTH)	5 CY
HYDROSEED	62 SY

6. OUTFALL PROTECTION ROCK SHALL BE TRANSPORTED TO INSTALLATION SITE FROM SE 41ST BY USE OF FULL ROUND OR HALF ROUND PIPE SHOOT.



PERMANENT DISTURBANCE AREA (OUTFALL PROTECTION) AREA = 560 SF PROVIDE RESTORATION PER NOTE 5.



PRELIMINARY NOT FOR CONSTRUCTION 01/31/18

Revision

No.

Date

By

Ckd

City of Bellevue

UTILITIES

CHRISTENSEN

ENGINEERS

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CITY OF BELLEVUE

SE 41ST ST CULVERT REPAIR

DISTURBANCE MITIGATION PLAN

Sheet 3 of 5

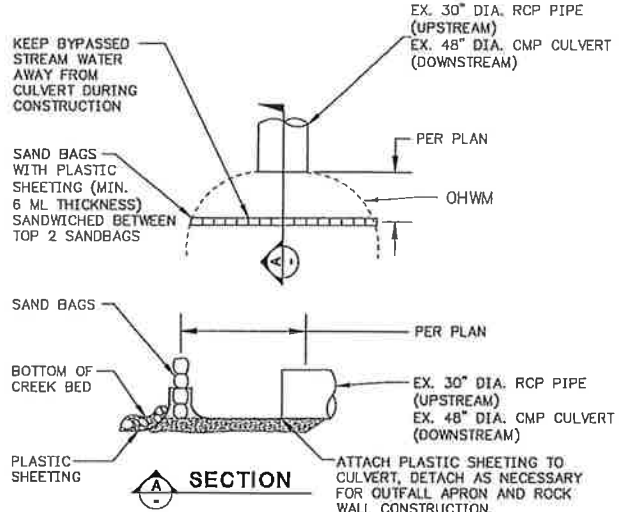
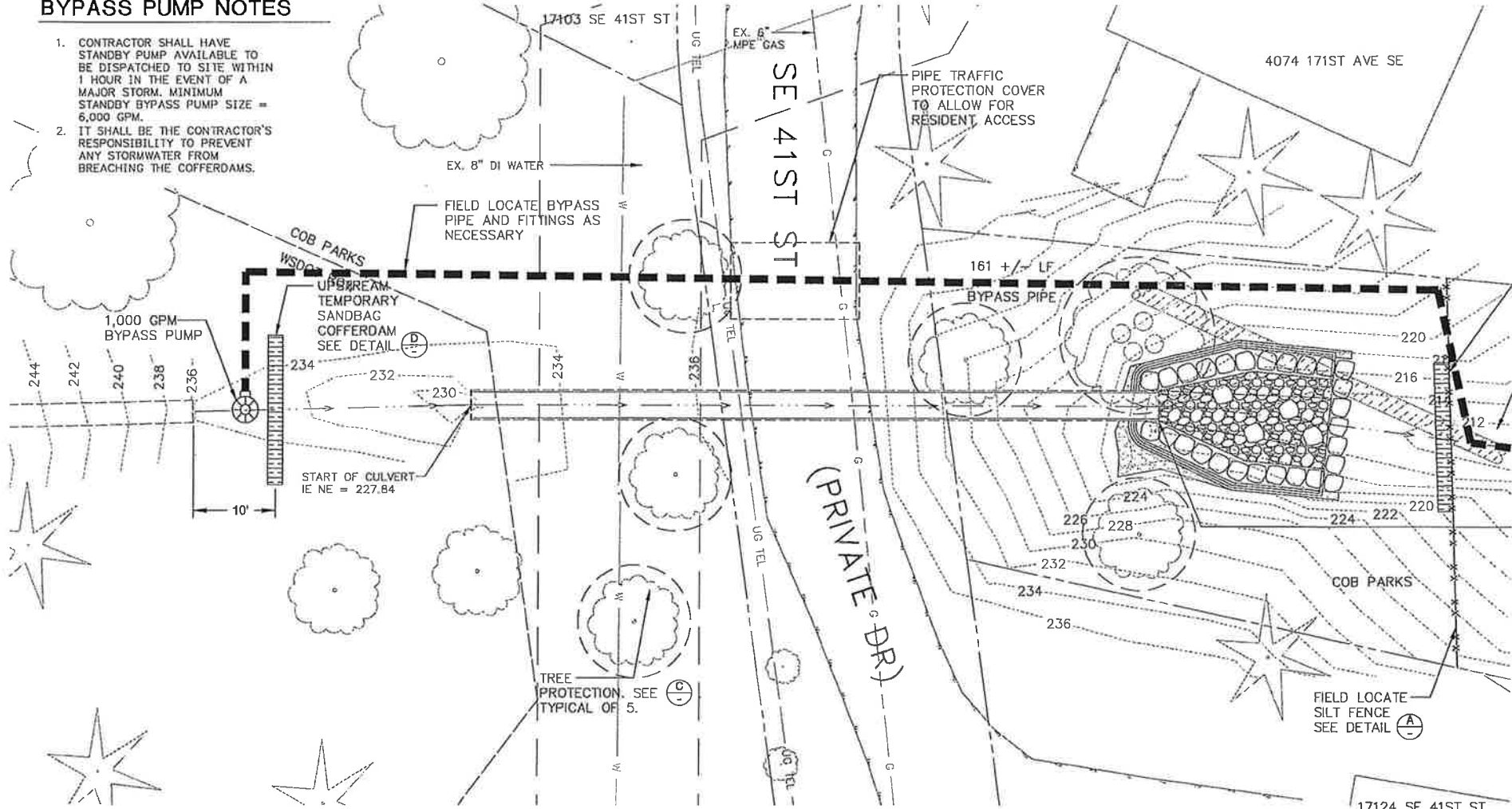
Job No. 221601

BYPASS PUMP NOTES

1. CONTRACTOR SHALL HAVE STANDBY PUMP AVAILABLE TO BE DISPATCHED TO SITE WITHIN 1 HOUR IN THE EVENT OF A MAJOR STORM. MINIMUM STANDBY BYPASS PUMP SIZE = 6,000 GPM.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PREVENT ANY STORMWATER FROM BREACHING THE COFFERDAMS.

CSWPPP NOTES

1. STOCKPILE MATERIALS ON COB PARKS PROPERTY.
2. PLACE STRAW WATTLE AT BASE OF ANY STOCKPILED MATERIALS ON-SITE.
3. LIMIT GROUND DISTURBANCE FOR INGRESS/EGRESS TO CONSTRUCTION ACTIVITY LOCATIONS TO MAXIMUM EXTENT FEASIBLE.
4. LIMIT DISTURBANCE OF STEEP SLOPE OF STREAM BANK TO MAXIMUM EXTENT FEASIBLE.

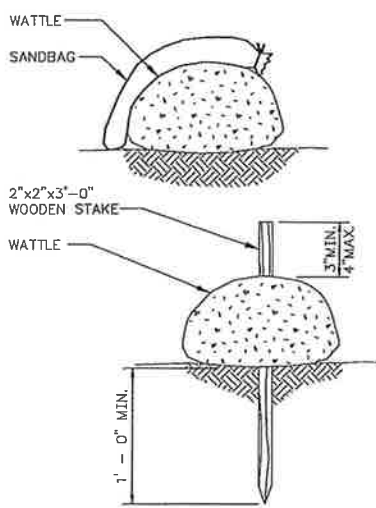
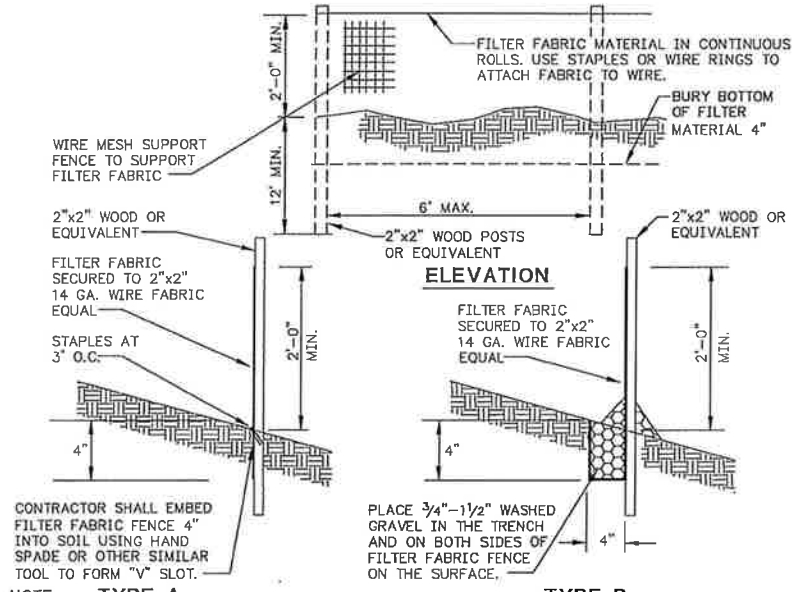


- NOTES:
1. DO NOT ALLOW CONSTRUCTION DEBRIS TO ENTER CREEK BED.
 2. ALL SANDBAGS, REBAR AND PLASTIC SHEETING SHALL BE REMOVED FOLLOWING CONSTRUCTION.
 3. DOWNSTREAM SILT FENCE NOT SHOWN.

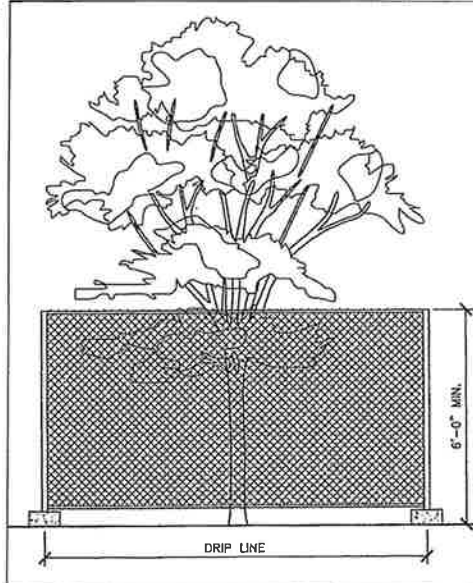
D DETAIL - TEMPORARY COFFERDAM
NOT TO SCALE

CSWPPP, TREE PROTECTION, TEMPORARY BYPASS

SCALE 1"=10'



- NOTES:
1. WATTLES SHALL BE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION 9-14.5(5).
 2. SECURELY KNOT EACH END OF WATTLE. ABOUT ADJACENT WATTLES TIGHTLY, END TO END, WITHOUT OVERLAPPING THE ENDS. RUNOFF SHALL NOT BE ALLOWED UNDER OR AROUND ROLL ENDS.
 3. PILOT HOLES MAY BE DRIVEN THROUGH THE WATTLES AND INTO THE SOIL WHEN SOIL CONDITIONS REQUIRE.
 4. WATTLES SHALL BE INSPECTED REGULARLY, AND IMMEDIATELY AFTER A RAINFALL PRODUCES RUNOFF, TO ENSURE THEY REMAIN THOROUGHLY IN CONTACT WITH THE SURFACE.
 5. PERFORM MAINTENANCE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION 8-01.3(15).



- NOTES:
1. **TREE PROTECTION DURING CONSTRUCTION:** A SIX FOOT HIGH TEMPORARY CHAIN LINK FENCE SHALL BE ERECTED AT DRIP LINE OF TREE(S) TO BE SAVED, OR A DISTANCE OF 15 FEET FROM THE TRUNK, WHICHEVER IS GREATER. THE FENCE SHALL COMPLETELY ENCIRCLE THE TREE(S). INSTALL FENCE POSTS USING BLOCKS ONLY. IF INSTALLING POSTS DIRECTLY INTO GROUND IS NECESSARY, AVOID DRIVING INTO MAJOR ROOTS. AT THE DISCRETION OF THE CITY INSPECTOR, FENCING MAY BE EXTENDED BEYOND THE DRIP LINE OR 15 FEET. THE CITY INSPECTOR MAY PERMIT ALTERNATIVE FENCING METHODS IF SITE CONDITIONS PROHIBIT THE INSTALLATION OF PIER BLOCKS (STEEP SLOPES, SOFT SOILS, ETC).
 2. **TREATMENT OF ROOTS EXPOSED DURING CONSTRUCTION:** FOR ROOTS OVER 1 INCH IN DIAMETER DAMAGED DURING CONSTRUCTION, MAKE A CLEAN STRAIGHT CUT TO REMOVE DAMAGED PORTION OF ROOT. ALL EXPOSED ROOTS SHALL BE TEMPORARILY COVERED WITH MOIST BURLAP TO PREVENT DRYING AND COVERED WITH SOIL AS SOON AS POSSIBLE.
 3. WORK WITHIN THE PROTECTION FENCE SHALL BE DONE MANUALLY. NO EXCAVATION, MATERIAL STOCKPILING, VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT/MACHINERY SHALL BE ALLOWED WITHIN THE LIMIT OF THE FENCING.

C TREE PROTECTION
NOT TO SCALE

A DETAIL - FILTER FABRIC FENCE
NOT TO SCALE

B DETAIL - STRAW WATTLE
NOT TO SCALE

City of Bellevue
UTILITIES

Drawn: SS
Designed: TC
Checked: SC
Approved: SC

CHS ENGINEERS

12507 Bel-Red Rd., Suite 101, Bellevue, WA 98005
www.chsengineers.com Ph: 425-637-3933

CITY OF BELLEVUE

SE 41ST ST CULVERT REPAIR
CSWPPP, TREE PROTECTION
AND TEMPORARY BYPASS

Sheet 5 of 5
Job No. 221601
12/17

Received
JUL 26 2018

PRELIMINARY PROCESSING
NOT FOR CONSTRUCTION
01/31/18

USER: T-cker Collins PLOTTING DATE: 1/31/2018 FILE LOCATION: K:\22-Bellevue\2018\221601-Trenchless On-call Utility Design\Task C - SE 41st Design\CAD\221601 - 2016 CULVERT REPAIR - DOWNSTREAM PRTN ONLY.dwg